

What is claimed is:

1. A cathodic protection polymeric compound, comprising:
 - (a) flowable material;
 - 5 (b) carbonaceous conductive media dispersed in the flowable material;and
 - (c) sacrificial metal particles also dispersed in the flowable material,wherein the sacrificial metal particles are less noble than a metal substrate to which the compound is intended to contact.
- 10 2. The compound of Claim 1, wherein the carbonaceous conductive media serve as a carbon-based electron transfer agent and are in the form of particles, platelets, fibers, tubes, or combinations thereof and optionally are functionalized with plating of metal.
- 15 3. The compound of Claim 1 or Claim 2, wherein the carbonaceous conductive media are fibers.
4. The compound of Claim 1 or Claim 2, wherein the tubes are multiple-walled
20 nanotubes.
5. The compound of Claim 1 or Claim 2, wherein the tubes are single-walled nanotubes.
- 25 6. The compound of any of Claims 1-5, wherein the flowable material is polymeric and is capable of forming a film or coating.
7. The compound of any of Claims 1-5, wherein the flowable material is a
30 pressure sensitive adhesive.

8. The compound of any of Claims 1-7, wherein the metal substrate is iron-containing and the sacrificial metal particles are zinc or aluminum.
9. The compound of any of Claims 1-8, further comprising an ionically
5 conductive agent in the flowable material.
10. The compound of Claim 9, further comprising a means for reducing passivation of the sacrificial metal particles.
- 10 11. The compound of Claim 10, wherein the means is a complexing agent.
12. The compound of any of Claims 1-11, further comprising an inherently conductive polymer in the flowable material.
- 15 13. A film formed from the compound of any of Claims 1-12.
14. A metal substrate having a surface to which the compound of any of Claims 1-12 is contacted.
- 20 15. A method of protecting a metal substrate, comprising the step of contacting the compound of any of Claims 1-12 with the metal substrate.
16. A method of using the compound of any of Claims 1-12, comprising
applying the compound of any of Claims 1-12 to a metal substrate, wherein the
25 compound and the metal substrate form a galvanic circuit in which the sacrificial metal particles are anodes and the metal substrate is a cathode and in which the carbonaceous conductive media serve as an electron transfer agent between the anodes and cathode.
- 30 17. The method of Claim 16, wherein the galvanic circuit is passive.

18. A method of making the compound of any of Claims 1-12, comprising the steps of mixing the carbonaceous conductive media into the flowable material and mixing the sacrificial metal particles into the flowable material.

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19. The method of any of Claims 1-12, wherein the carbonaceous conductive media are present in an amount of from about 0.01 to about 10 weight percent of total solids of the flowable material, and wherein the sacrificial metal particles are present in an amount of from about 0.1 to about 95 weight percent of the total solids of the flowable material.

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